layers on the end of the second contact **461** and on the contacting surface **423'** of the first contact **421'** resulting from long term use will be scratched by the aforesaid sliding mechanism, so as to reduce resistance between the first contact **421'** and the second contact **461**. Components with denoted in this embodiment identical to those in the aforesaid embodiment have identical structures and functions, and further description is omitted herein for simplicity.

Please refer to FIG. **11** to FIG. **13**. FIG. **11** is an exploded diagram illustrating the connector assembly **30** is implemented in another first electronic device **36'** and another second electronic device **38'** according to the embodiment of the present invention. FIG. **12** is an exploded sectional diagram illustrating the connector assembly **30** is implemented in the first electronic device **36'** and the second electronic device **38'** according to the embodiment of the present invention. FIG. **13** is a diagram of the connector assembly **30** illustrating the first electronic device **36'** is inserted into the second electronic device **38'** according to the embodiment of the present invention. As shown in FIG. **11** to FIG. **13**, the first connector **32** of the connector assembly **30** can be coupled to the other first electronic device **36'**, and the second connector **34** of the connector assembly **30** can be coupled to the other second electronic device **38'**. In this embodiment, the first electronic device **36'** is a portable electronic device, e.g. a cell phone, and the second electronic device **38'** is a docking base. Furthermore, the connector assembly **30** can be used for allowing the docking base to be electrically connected to the portable electronic device, such that the docking base electrifies the portable electronic device. In other words, the connector assembly **30** of the present invention can be implemented into the portable electronic device and the docking base as well. Furthermore, implementation of the first electronic device **36'** is not limited to those mentioned in this embodiment. For example, the first electronic device **36'** can be a tablet computer or a personal digital assistant (PDA) as well. Components with denoted in this embodiment identical to those in the aforesaid embodiment have identical structures and functions, and further description is omitted herein for simplicity.

Compared to the prior art, the present invention adopts a design that the normal of the contacting surface of each of the first contacts is not parallel to the mating direction to allow the end of each of the second contacts of the second contact set to contact the contacting surface of the corresponding first contact when the second connector is inserted into the first connector along the mating direction, such that the end of the second contact slides from the first contact position to the second contact position. Accordingly, the oxidation layers on the end of the second contact and on the contacting surface of the first contact resulting from long term use will be scratched by the aforesaid sliding mechanism, so as to reduce resistance between the first contact and the second contact. In such a manner, the structure of the inclined surface adopted by the contacting surface of the first contact of the present invention not only prevents the first contact and the second contact from being overheated due to a large resistance, but also prevents the first contact and the second contact from arcing due to overheat when the first contact and the second contact are electrified, so as to enhance safety of the first connector and the second connector in use.

In addition, the present invention utilizes the control unit for driving the second electronic device to power the first electronic device when the magnetic sensor senses the magnetic field generated by the magnetic member, so as to confirm that current passes between the end of the second contact and the contacting surface of the first contact only when the end of the second contact slides along the contacting surface of the first contact from the first contact position to the second contact position. In such a manner, the present invention ensures that there will be no current passing between the end of the second contact and the contacting surface of the first contact before the oxidation on the end of the second contact and on the contacting surface of the first contact due to long term use is not scratched. Furthermore, it prevents the first contact and the second contact from being overheated due to the large resistance, as being electrified and to enhance the safety of the first connector and the second connector in use.

Those skilled in the art will readily observe that numerous modifications and alterations of the device and method may be made while retaining the teachings of the invention. Accordingly, the above disclosure should be construed as limited only by the metes and bounds of the appended claims.

What is claimed is:

1. A connector assembly, comprising:

a first connector coupled to a first electronic device, comprising:

a first housing; and

a magnetic member installed inside the first housing and for generating magnetic field; and

a second connector coupled to a second electronic device and detachably mated with the first connector, the second connector comprising:

a second housing; and

a magnetic sensor disposed in the second housing, the magnetic sensor sensing the magnetic field generated by the magnetic member when the second connector mates with the first connector, so as to drive the second electronic device to power the first electronic device

a control unit coupled to the magnetic sensor, the control unit controlling the second electronic device to power the first electronic device when the magnetic sensor senses the magnetic field generated by the magnetic member, wherein the control unit is a circuit board connected to the second housing.

2. The connector assembly of claim **1**, wherein the magnetic sensor is a Hall sensor.

3. The connector assembly of claim **1**, wherein the first connector further comprises a first shell member covering the first housing, and the second connector further comprises:

a second shell member covering the second housing, the magnetic member attracting the second shell member, such that the second connector mates with the first connector, wherein the first shell member abuts against the second shell member when the second connector mates with the first connector, such that the first shell member is electrically connected to the second shell member.

4. The connector assembly of claim **3**, wherein a containing space, an assembly opening, a mating opening are formed on the first shell member, the mating opening and the assembly opening respectively communicate with the containing space, the first housing is installed inside the containing space via the assembly opening, and the second connector is detachably mated with the first connector via the mating opening.

5. The connector assembly of claim **4**, wherein at least one fixing post is further formed on the first shell member, at least one fixing hole is formed on the first housing in a position corresponding to the at least one fixing post, and the at least one fixing post is for inserting into the at least one fixing hole on the first housing in a tight fit manner when the first housing is installed inside the containing space via the assembly opening, so as to fix the first housing inside the containing space.

6. The connector assembly of claim **3**, wherein the second shell member is made of magnetic material.

7. The connector assembly of claim **3**, wherein at least one shell fixing lug is formed on the first shell member for fixing the first shell member inside the first electronic device.